

DSV Seminars 2019



UNIVERSITÀ
DEGLI STUDI DI TRIESTE



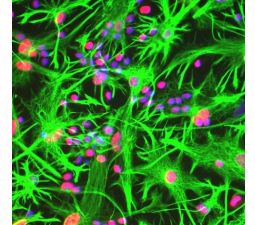
DIPARTIMENTO DI
SCIENZE DELLA VITA



Master Degree in Neuroscience

June 12, 2019 - 10:00

Aula Bachelet – Edificio Centrale, Piazzale Europa



Prof. Agenor Limon

University of Texas Medical Branch, Galveston

Invited by Annalisa Bernareggi

Synaptic dysfunction of the Default Mode Network in Alzheimer's disease

Disturbances in excitatory to inhibitory (E/I) balance in forebrain circuits may be a contributing factor to the progression of Alzheimer's disease (AD) and dementia, although direct evidence for E/I imbalance in the human condition has not been shown. In this seminar it will be discussed the ways we have started to integrate anatomical and functional measures in the human brain to study putative alterations in the E/I ratio. Fluorescent deconvolution tomography, flow cytometry, microtransplantation of membranes and gene expression converge into showing synaptic alterations in the parietal cortex, a brain region early affected in the disease. As the parietal cortex is part of the default mode network that has been shown in AD to be overly active and fails to deactivate during cognitive tasks, it will be discussed how the present findings support the broader hypothesis that E/I imbalance in AD plays a role in the disruption of forebrain circuits that, in turn, contributes to the cognitive decline seen in this disorder.

